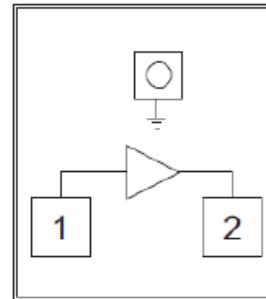


Features

- Operating Frequency: 50-500MHz
- Small Signal Gain: 22dB
- Gain Flatness: ± 0.4 dB
- Noise Figure: 4.2dB
- P-1dB: 20dBm
- OIP3: 32dBm@500MHz with Pin=-15dBm
- Current: 60mA
- 50Ohm input/output
- Die Size: 0.62 x 0.62 x 0.1 mm

Functional Block Diagram

Typical Applications

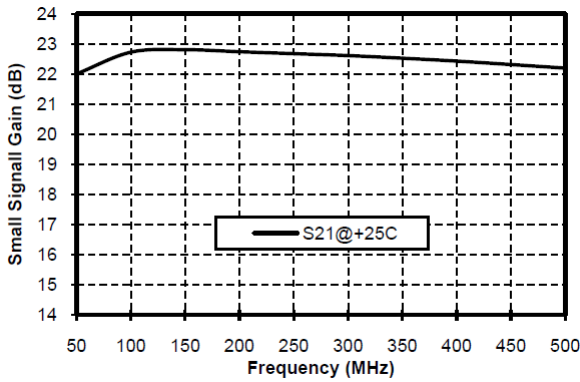
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

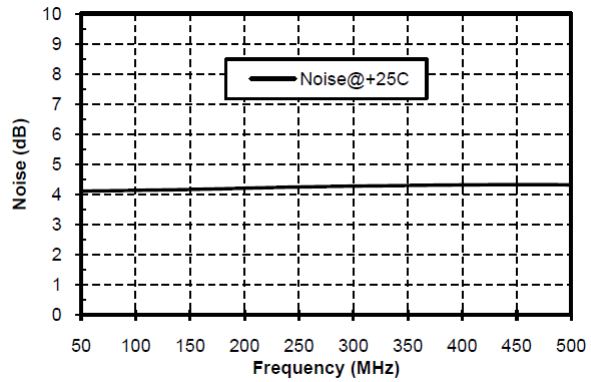
TA = +25°C, VCC=+5V

Parameters	Min.	Typ.	Max.	Units
Frequency	50-500			MHz
Small Signal Gain		22		dB
Gain Flatness		± 0.4		dB
Input Return Loss		18		dB
Output Return Loss		22		dB
Reverse Isolation		27		dB
P-1dB		20		dBm
Psat		22		dBm
OIP3@500MHz with Pin=-15dBm		32		dBm
Noise Figure		4.2		dB
Static Current		60		mA

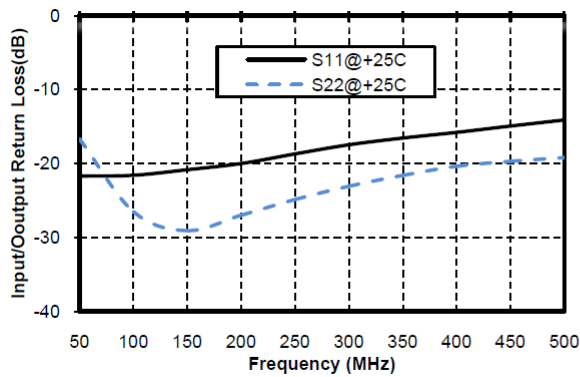
Gain vs. Frequency



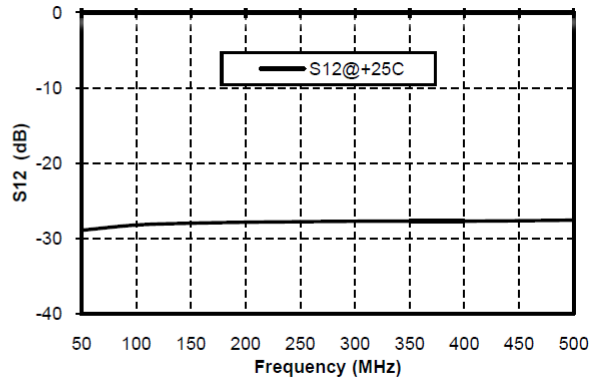
Noise Figure vs. Frequency



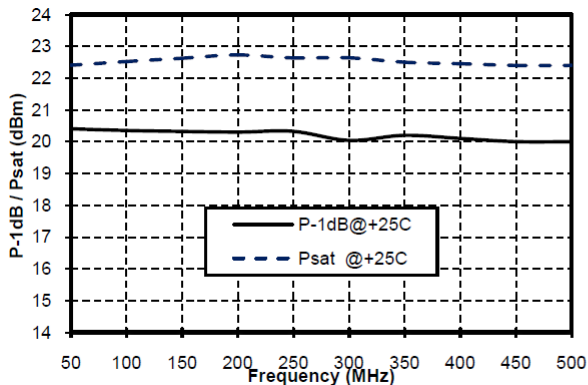
Input/Output Return Loss vs. Frequency



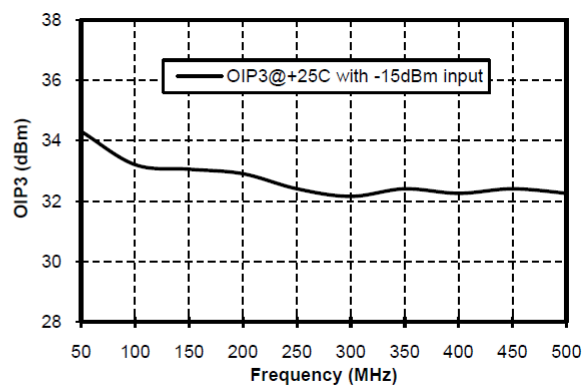
Reverse Isolation vs. Frequency



P-1dB/Psat vs. Frequency



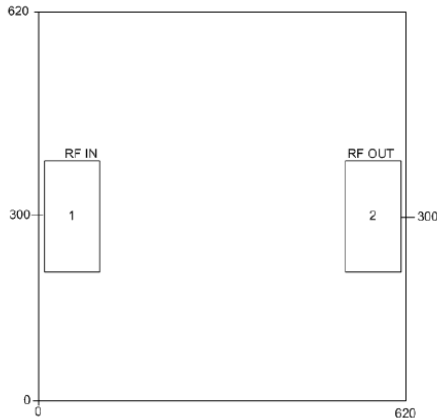
OIP3 vs. Frequency (Pin=-15dBm)



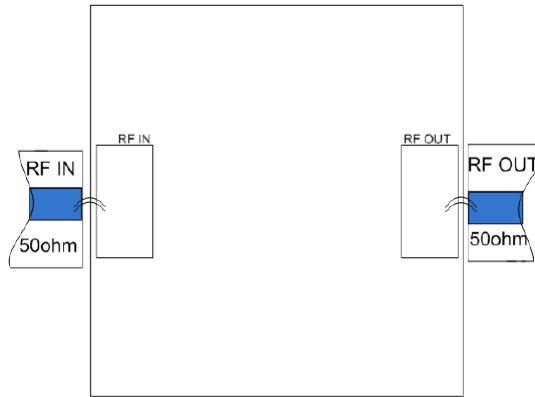


Outline Drawing(Die):

All Dimensions in um



Assembly Drawing(Die):



Pad Description

PAD	Function	Description
1	RF IN	RF input, external DC-blocking capacitor required
2	RF OUT	RF output and DC bias, bias the current by external choke inductor at output terminal , external DC-blocking capacitor required
Die Bottom	GND	Die bottom must be connected to RF/DC ground



Recommended bias circuit

	Device	Frequency (MHz)			
		50	150	300	500
	L1	3.3 uH			
	C1, C2, C3	0.01µF			
	V _{CC} (V)	5V			

Notes:

1. Die thickness: 100um
2. Typical bond pad is 100*100 µm²
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads

Maximum Ratings:

1. RF input power: +25dBm
2. Operating Current: 90mA
3. Storage temperature: -65°C to +150°C
4. Operating temperature: -55°C to +85°C